Wings on the Wind

An Introduction to Endangered Species

Pre-Visit Lesson Plans, Grade Level(s): 4-8

Subject(s):

Standards listed in Appendix A

Science

English-Language Arts

Objective:

1. Students will be able to name three endangered species and the factors leading to their endangered classification.
2. Students will be able to describe at least four characteristics, features or traits of the California condor.
3. Students will understand the concepts of the following words: endangered, extinct, ecosystem, and biodiversity. This will be demonstrated by their ability to orally provide appropriate examples of each.

Overview:

Children are taught from a young age about different kinds of animals. They read books, watch TV shows, and learn about animals in school. Some of these animals are being destroyed or are losing their habitat every year. This results in their becoming endangered or extinct. This lesson has been developed to promote and ensure the just and kind treatment of animals as well as become more familiar with endangered species, specifically the California condor. By the end of this lesson, students will be able to share knowledge about endangered species with others thus improving the quality of life of animals and the environment. By allowing students to learn of the many endangered animals around the United States, the hope is that someday they will try to preserve animals from extinction and prevent animal cruelty. In the first part of this lesson, students will learn the importance of saving endangered species and the specific animals that need our help. The second part of this lesson brings students closer to endangered species that live right in their "backyard" and what is being done to protect them.

Background Information:

The California condor has an especially long wingspan (approximately ten feet) compared to body length. This wing length, together with the width, creates a wing area that can support the relatively heavy body of the condor in flight. Like other raptors, the condor uses its wings to glide on warm updrafts of air. Condors can travel 150 miles in a day and reach altitudes of 15,000 feet. It searches the ground below while watching for vultures, coyote, and other animals already feeding on carrion (deceased animals). Prior to 1900, California Condors were common throughout a large portion of the North American continent. By the early 1980's the population plummeted to fewer than 25 California Condors left in the world. Increasing loss of habitat, primarily due to development, resulted in a decline in prey. This coupled with food source poisoning; lead poisoning and shootings caused condor populations to decrease dramatically. Since condors feed on deceased animals, any game killed with lead shot would pass lead poisoning to the condor. In addition, farmers and ranchers would inadvertently pass poison meant for rodents and coyote on to condors.

Recovery:

The recovery of the California condor is one of the greatest endangered species success stories. California Condors were first protected in 1967 under a precursor to the Endangered Species Act, and later under the Endangered Species Act of 1973. Despite these efforts, populations declined. In 1987, the last wild condors were captured to ensure their safety and to serve as parents in captive breeding programs at the Los Angeles Zoo and the San Diego Wild Animal Park. The first successful breeding of captive condors was accomplished in 1988. As more and more pairs reproduce successfully, the condor population has grown in excess of 150 birds in 2001.

Assessment:

The first assessment will be the Pre-Visit Assessment. This will be used to determine what knowledge students have of the subject matter. After the students visit the Park, they will repeat the activity with the Post-Visit Assessment to see if the objectives have been met.

Procedure:

Activity One: Brainstorming

Students will begin the lesson with a brainstorming session on basic (survival) needs. Write this question on blackboard or other display area. "What do you need to survive?" Diagram student answers radiating outward. Next, change the question to: "What does an animal need (i.e.: bear, fish, etc) to survive?" Add additional answers to diagram. If any of the desired answers listed below are not included, lead students toward them.

Desired answers:

1. Nutrients (Food & Water)
2. Shelter
3. Range (space for hunting)
4. Similar Species (procreation)
5. Protection from excessive outside influences (over hunting, pesticides or other poisonings)
6. Other student answers

Take one or more of the topics from the first brainstorming session and continue to brainstorm on the outcomes of its reduction or elimination. Instructor may act out the scenario. For example, if using #3 (range), allow students to wander around the classroom as if roaming their hunting grounds. Starting from the front of the classroom, the instructor will walk toward the back reducing the student's "hunting" area. While walking, the instructor will explain that a city is growing into their hunting grounds. Have students describe their thoughts on what the possible outcomes of space reduction or elimination would mean to their survival, the survival of other animals living in that same area.
Draw a circle around the original brainstorming answers and ask students "what is this interconnection called?" This is the lead-in to the first slide listed below (ecosystem).

Activity Two: Slideshow

Students will participate in a ranger led in-class PowerPoint presentation. This slide show will introduce students to many definitions and different kinds of animals considered threatened, endangered and extinct. It will give the students a sense of why the problem exists and how it can be reduced or eliminated. The scope of endangered species will be narrowed from a global perspective to that of the students' own backyards, with an emphasis on the California condor. During the slide show the students will discuss the following questions:

1. What does extinct and endangered mean?
2. How does something become each of these?
3. What are things we can do to help prevent animals from becoming endangered?
4. What characteristics, traits or features distinguish a California condor?
5. Describe desirable habitat for a California condor.
6. Describe a California condor nest.
7. Explain what a California condor eats.

This slide show will take about thirty five to fourty minutes.

Activity Three: Class Discussion
After the slide show, the remaining portion of class time will be used as a question/answer and discussion period

This introduction to endangered species and the California condor ends the pre-visit lesson. Before visiting the park, each teacher will receive a copy of the Condor Lab Book. The Condor Lab Book is available from the Pinnacles Education Specialist. Students should become familiar with the information contained in the Lab Book prior to their visit.